



# SEQUENCE LISTING

<110> Bond, Christopher J.

<120> SYNTHETIC ANTIBODY PHAGE LIBRARIES

<130> 11669.136USU1

<140> 10/759,731

<141> 2004-01-16

<150> US 60/441,059

<151> 2003-01-16

<150> US 60/488,610

<151> 2003-07-18

<150> US 60/510,314

<151> 2003-10-08

<160> 194

<170> PatentIn version 3.3

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35 40 45

Tyr Ser Ala Ser Phe Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Arg Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
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Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val  
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Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr  
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Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
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Glu Arg Gly  
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<400> 61

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<211> 13

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Tyr

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Ser Arg Ser Arg Gly Trp Trp Thr Ala Ala Met  
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Ser Arg Ala Ser Arg Asp Trp Tyr Gly Ala Met  
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Ala Tyr Ser Ser Asn Tyr Tyr Arg  
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Thr Thr Gly Thr Asp  
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Gly Tyr Ser Tyr Gly Thr Arg  
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Gly Tyr Asn Ser Gly Ser Arg  
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<400> 91

Ala Lys Trp Arg Thr Ser Trp Lys Tyr  
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Thr Ser Ser Ser Ala  
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Ala Trp Ser Asn Gly Ser Arg  
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Thr Thr Asn Thr Trp  
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Thr Asn Gly Asn Tyr  
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Gly Trp Ser Asn Gly Tyr Arg  
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<400> 104

Thr Thr Ser Asn Asp  
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Ala Trp Ser Tyr Asn Tyr Arg  
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<400> 106

Ala Arg Arg Ser Arg Trp Ser Arg Ala  
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<400> 107

Thr Gly Asn Ser Trp  
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Val Ala Thr Tyr Tyr Asn  
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Trp Gly Ala Lys Gly Thr Trp  
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Asn Ala Asp Ser Ala  
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Tyr Ala Tyr Asp Tyr Tyr  
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Trp Gly Trp Thr Thr Asn Gly  
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Asn Asp Asn Thr Ala  
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Val Ser His Asp Thr Tyr  
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Trp Gly Trp Glu Thr Asp Gly  
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Asn Gly Lys Ser Ser  
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<210> 119

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Asn Thr Ala Tyr Gly  
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Leu Ala Tyr Ala Tyr Asn  
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Ala Ala Ala Trp Ala Ser Tyr  
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Thr Thr Glu Ser Gly  
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Val Tyr His Asp Lys Tyr  
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Trp Trp Tyr Ser Trp Asn Trp  
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cgggtaaaga acgtgaatcg gttgccgcca ttaactggga ttcggctcgt acttactatg 180  
cttcgtccgt ccgtgggtcgt ttactatatt cacgtgataa tgccaaaaaa actgtctatt 240  
tgcagatgaa ttcattgaaa ccagaagata ctgccgtcta tacttgtggt gctgggtgaag 300  
gcgggtacttg ggattcttgg ggtcagggtta cccagggtcac tgtctcctct gccgggtggta 360  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Gly Ser Thr Tyr  
20 25 30

Asp Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Ser Val  
35 40 45

Ala Ala Ile Asn Trp Asp Ser Ala Arg Thr Tyr Tyr Ala Ser Ser Val  
50 55 60

Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Lys Thr Val Tyr  
52

65		70		75		80									
Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Thr	Cys
			85						90					95	
Gly	Ala	Gly	Glu	Gly	Gly	Thr	Trp	Asp	Ser	Trp	Gly	Gln	Gly	Thr	Gln
			100					105					110		
Val	Thr	Val	Ser	Ser	Ala	Gly	Gly	Met	Asp	Tyr	Lys	Asp	Asp	Asp	Asp
		115					120					125			

Lys

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Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Gly
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Arg Ile Xaa Cys

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<223> VHH RIG C terminal sequence

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<222> (2)..(2)  
<223> Xaa is I, L, V, R, W, or S

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or more deletions up to 16 deletions

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<220>  
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Xaa Xaa Xaa Xaa Xaa  
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 <223> Xaa is I, L, V, R, W or S

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 <223> Xaa is W, G, R, M, S, or A

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      or more deletions up to 16 deletions

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<223> Xaa is any naturally occurring amino acid

<400> 142

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1      5      10     15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20     25

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<220>
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<400> 143

Arg	Xaa	Xaa	Arg	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1			5				10					15			

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
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<220>  
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<220>  
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 <222> (21)..(21)

<223> Xaa is V, L, or P

<220>

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<400> 144

Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Trp Xaa Xaa Xaa Xaa Xaa  
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<210> 145

<211> 17

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<222> (16)..(17)

<223> Xaa is any naturally occurring amino acid

<400> 145

Arg Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Trp Val Xaa  
1 5 10 15

Xaa

<210> 146

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<400> 146

Val	Leu	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Phe	Xaa	Arg	Val	Xaa
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Xaa

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<400> 147

Arg	Leu	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Xaa	Xaa	Xaa
1			5					10						15	

Xaa

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<400> 148

Leu	Leu	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Xaa	Leu	Xaa
1			5						10					15	

Xaa

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<400> 149

Arg	Ile	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Trp	Val	Xaa	Xaa
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Arg Xaa Xaa Arg  
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 <223> s is g or c

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 <223> r is a or g

<220>  
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 <223> k is g or t

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 <223> s is g or c

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<223> m is a or c

<220>

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<222> (43)..(43)

<223> k is g or t

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<212> DNA

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<222> (37)..(38)

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<223> s is g or c

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<223> n is a, g, c, or t

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<222> (45)..(45)

<223> s is g or c

<400> 152

gatatgggct ggnnscgtca ggctccgggt aaagaannsg aannsgttgc cgcca 55

<210> 153

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<212> DNA

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<222> (18)..(18)

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<400> 153

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<211> 87

<212> DNA

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<222> (28)..(29)

<223> n is a, g, c, or t

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<223> s is g or c

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 nnsnnsnnsn nsnnstgggg tcagggt 87

<210> 155  
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kccksggytr ctksgtgggg tcagggt 87

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 <222> (73)..(73)  
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<400> 156  
 gccgtctata cttgtggtgc tggtytsyt rmasstsstg stkckccgy tgstrytkyt 60  
 rctsstgyts makcctgggg tcagggt 87

<210> 157  
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kytgstsytg ytgsttgggg tcagggt 87

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<400> 158  
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 gmarygscas ytgcgtaggg tcaggg 86

<210> 159  
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<400> 159

Arg Ile Xaa Cys

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<210> 160

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<212> PRT

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<223> Xaa is any naturally occurring amino acid

<400> 160

Phe Xaa Arg Val

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<210> 161

<211> 4

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Trp Xaa Xaa Leu

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Trp Xaa Met Pro

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<210> 163

<211> 17

<212> PRT

<213> Artificial Sequence

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<223> CDRH3

<400> 163

Arg Ile Gly Arg Ser Val Phe Asn Leu Arg Arg Glu Ser Trp Val Thr  
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Trp

<210> 164

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

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<400> 164

Leu Leu Arg Arg Gly Val Asn Ala Thr Pro Asn Trp Phe Gly Leu Val  
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Gly

<210> 165

<211> 17

<212> PRT

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<400> 165

Val Leu Lys Arg Arg Gly Ser Ser Val Ala Ile Phe Thr Arg Val Gln  
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Ser

<210> 166

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<212> PRT

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<400> 166

Arg Leu Val Asn Gly Leu Ser Gly Leu Val Ser Trp Glu Met Pro Leu  
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Ala

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<211> 17

<212> PRT

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Phe Val Ala Gly Pro Trp Trp Trp Arg Trp Arg Thr Pro Ser Gly Val  
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Ala

<210> 168

<211> 17

<212> PRT

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<220>

<223> CDRH3

<400> 168

Val Leu Glu Leu Arg Ser Ser Gly Gly Asn Ala Arg Trp Met Ser Leu  
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Tyr

<210> 169  
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<212> PRT  
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<220>  
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<400> 169

Leu Arg Ile Ser Pro Tyr Ala Phe Trp Leu Gly Thr Trp Ala Pro Ser  
1 5 10 15

Tyr

<210> 170  
<211> 17  
<212> PRT  
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<220>  
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<400> 170

Leu Trp Thr Arg Ala Arg Ser Trp Arg Trp Trp Trp Arg Arg Glu Gln  
1 5 10 15

Phe

<210> 171  
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Trp Arg Ser Trp Ile Ser Ser Ile Leu Gly Leu Arg Thr Trp Trp Tyr  
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Ala

<210> 172

<211> 17  
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<220>  
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<400> 172

Lys Ser Thr Arg Trp Arg Ala Gly His Gly Arg Thr Phe His Trp Leu  
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Ser

<210> 173  
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<400> 173

Ala Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Tyr Ala Met Asp Tyr  
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<210> 175

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<210> 177

<211> 9

<212> PRT



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1 5

<210> 178

<211> 12

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<212> PRT

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<223> F171b

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<211> 14

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Ala Xaa Xaa Xaa Xaa Xaa Phe Xaa Tyr

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Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Met Asp Tyr

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 <223> Xaa is A, V, or G

<400> 187

Ala	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Met	Asp	Tyr
1				5						10				15	

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Tyr

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Ser Arg Trp Gly Xaa Xaa Xaa Xaa Xaa Ala Met Asp Tyr  
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<400> 191

Asn Ala Asp Ser Ala  
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Thr Gly Gly Ser Trp  
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or more deletions up to 15 deletions

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<222> (22)..(22)  
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<223> Xaa is V, L, or P

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<222> (25)..(25)  
<223> Xaa is W, G, or S

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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20 25

<210> 194  
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<400> 194

Arg Ile Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Trp Val Xaa Xaa



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